

(PCT Article 36 and Rule 70)

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/000803

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-4 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-6 \_\_\_\_\_ received by this Authority on 22.04.2005 with letter of 19.04.2005
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/2-2/2 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☒ the claims, nos. 7 \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims <u>1-6</u>	YES
		Claims <u></u>	NO
	Inventive step (IS)	Claims <u>1-6</u>	YES
		Claims <u></u>	NO
	Industrial applicability (IA)	Claims <u>1-6</u>	YES
		Claims <u></u>	NO
2.	Citations and explanations (Rule 70.7)		
	Reference is made to the following documents:		
	D1: FR-A-2 781 576 (VALEO SYSTEMES ESSUYAGE) 28 January 2000 (2000-01-28)		
	D4: EP-A-0 927 883 (HOYA CORP) 7 July 1999 (1999-07-07) .		
	1. The subject matter of claim 1 is novel within the meaning of PCT Article 33(2) and involves an inventive step within the meaning of PCT Article 33(3) .		
	<p><i>page 1, lines 1-23:</i>      a device having a transmission and reception unit which sends light into a defined target area and detects and evaluates incoming light, wherein: for the detection of dirt on a transparent cover pane an input-coupling and an output-coupling spot is disposed in a defined</p>		

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	<p>position, in such a way that</p> <p><i>figure 1;</i> <i>page 1, line 24, to</i> <i>page 2, line 7</i></p> <p>means (32, 22, 28 ) for the input-coupling of light are provided which inject the light at a defined input- coupling spot in a defined direction laterally into the cover pane and the light traverses the cover pane lengthways, and</p> <p><i>figure 1;</i> <i>page 2, lines 7-17</i></p> <p>means for the detection (20) of the portion of light arriving at the defined light output- coupling spot (34) are provided and the degree of contamination with dirt is deduced from this portion.</p> <p>1.2 The subject matter of claim 1 differs from the disclosures in document D1 in that</p> <p>(a) the transmission and reception unit is part of an optical environment recognition system, and</p> <p>(b) the scanning beam can be pivoted over the recognized target area, and</p> <p>(c) the input-coupling and output-coupling spot is disposed at a pivot position of the scanning beam.</p>

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Consequently, the subject matter of claim 1 is novel (PCT Article 33(2)).

1.3 The problem solved by features (a) to (c) is that of using the same transmission and reception unit for a recognition of the environment (seat occupation, distance control) in one pivot position and to measure contamination with dirt of the cover pane in another pivot position.

1.4 Document D4 discloses a device (see *paragraph 39, lines 15-20, paragraph 64, figure 1*) for error detection in transparent panes, wherein the light beam is pivotable so as to evaluate different areas of the pane.

However, this device does not permit for environment recognition as described in the subject matter of claim 1.

1.5 For these reasons the subject matter of claim 1 would not appear to be obvious to a person skilled in the art. Consequently, claim 1 involves an inventive step (PCT Article 33(3)).

2. Claims 2-6 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.